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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,000	04/06/2000	David A. Cathey	3976US (98-0063)	7982

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EXAMINER
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ZAMANI, ALI A

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 01/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/544,000

Applicant(s)  
David A. Cathey

Examiner  
Ali Zamani

Art Unit  
2674



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on Apr 6, 2000

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 1-24 is/are pending in the application

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-24 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2

20) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Chan et al. (US Pat. No. 6,322,229).
3. IN regard to claims 1-7, Chan et al. disclose a remote computer keyboard comprising: an enclosure member (4); a printed circuit board (6) positioned in enclosure member (4) ; a plurality of depressible key switch (9) devices array above printed circuit board (6); a key cap (310) mounted atop each switch device (9) of plurality, each cap having at least one identifying graphic symbol formed on an upper surface thereof; and illumination apparatus (16) illuminating at least one graphic symbol on each key cap. Chan et al. teach the terms keyswitch assembly or key refer to the device conventionally provided in keyboards that is depressed to make contact with an affect (close) its particular switch on the circuit board or membrane (col. 3, lines 17-51). Chan et al. also teach that the key caps (310) are molded using translucent plastic and have opaque markings or portions on their tops, and the key stems and other parts of the keyswitches are either translucent, transparent, or reflective, so that the keyswitch as a whole tends to transfer or reflect

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light and the EL material may be positioned directly underneath a translucent or transparent base plate that is the uppermost portion of the housing of the keyboard (see Figs 9 and 10, col. 8, lines 44-60). Chan et al. further teach various materials may be used for the parts of the keyboard, for example, transparent key caps may be ABS or P.C. plastic; transparent hinges may be nylon or P.C.; transparent or semi-transparent "rubber" transparent or white contact inserts may be POM or nylon, transparent base plates may be ABS or P.C., and lower housing members may be metal or plastic and other materials may be chosen for desired translucency and/or color, with durability of the material as a main objective (col. 9, lines 21-30). Chan et al. Further teach one or more panels comprising EL material may be laid down between keyswitches and around the stems or stem paths or underneath the keyswitches, in one or more areas of the keyboard and the panels may be of various regular or irregular shapes to backlight particular areas of the keyboard, and the panels may radiate light over all or substantially all of their top surfaces, or may have area masked or deactivated from radiating light so that not all of the panel radiates light (col. 3, lines 52-60). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a self-powered light sources and, in particular to light sources activated by radioactive materials, such as tritium in order to provide a desired cordless keyboard having illuminated symbols appearing at the surface of the key caps for improved viewing in a dark place.

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***Claim Rejections - 35 USC § 103***

4. Claims 8-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. In view of Garcia Jr. et al. (US Pat. No. 5,034,602)..

In regard to claims 8-24, Chan et al. is discussed above. Chan et al. substantially teach the above claimed limitations except for teaching at least one “optical fiber strand directing light from said at least one light source to each key cap”. However, Garcia et al. disclose an optically activated keyboard having key members and the key cap has a light transmissive portion with a symbol (col. 1, lines 50-60) and the symbol can be disposed in the light conducting plunger or there beneath whereby the light entering the transparent key cap is in the shape of the desired symbol in either a negative or a positive representation thereof, thereby projecting the desired symbol from the key cap. Thus, it would have been obvious to one of ordinary skill in the art to combine the keyboard of Chan et al. with optical keyboard of Garcia, Jr. et al. to provide a durable lighting system that results in a durable and low maintenance keyboard.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dugas et al. and Kim and Urquhart et al. and Hart made of record to show various types of illuminated keyboard.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

January 11, 2002



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600